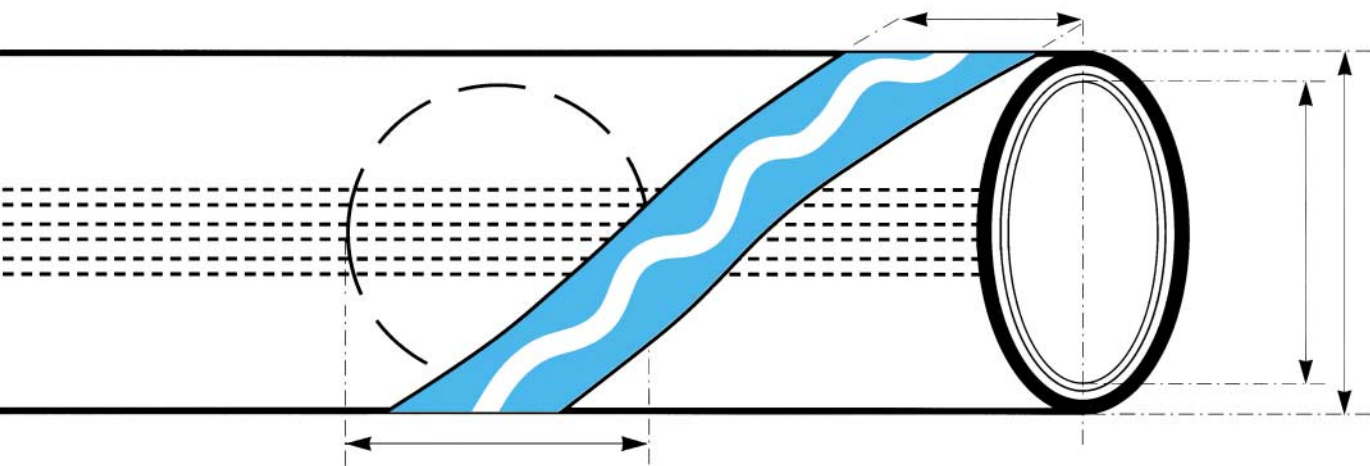


**ELAFLEX**



SCHLAUCH + ARMATURENTECHNIK

Sales Division PAL Chemical Hoses



# PAL-High Quality Hoses

FOR THE  
CHEMICAL INDUSTRY

made by

**CONTITECH** 

2003 Edition

## PAL High Quality Hoses: Exceeding Standards Requirements.

The PAL range of hoses, manufactured by CONTITECH, stand for reliability, security and long service life. More than sixty years of experience in the construction, development and production of high quality hoses underlines the expertise.

Modern manufacturing equipment, special fabrication procedures, the use of high-grade raw materials and continuous production controls guarantee first class products.

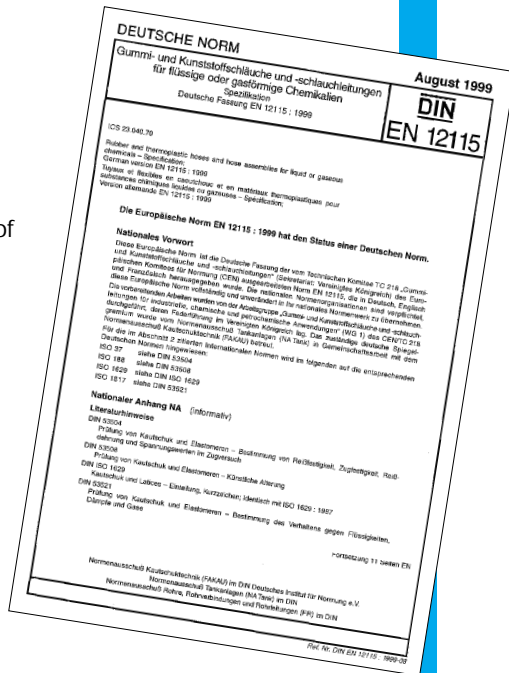
This, together with our long international experience in product application and distribution are the basis for customer satisfaction.

### Construction Features

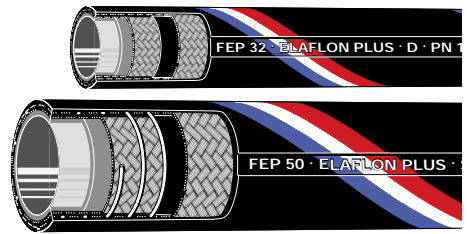
The covers are resistant to abrasion, ozone and UV and electrically conductive (elastomer basis: CR/NBR and EPDM respectively).

The reinforcements consist of at least two textile plies. SD (suction and delivery) hoses are provided with an incorporated steel wire helix.

Working pressure 16 bar, minimum burst pressure 64 bar (higher values for Butapal and Pyropal). Allowable vacuum see table next page.



## ELAFLON® PLUS FEP



### UNIVERSAL HOSE

#### Lining

- homogeneous, smooth bore, seamless
- FEP (Teflon® FEP fluor-ethylene propylene), transparent
- FDA approved
- suitable for all standard chemicals up to +100° C, briefly up to +130° C
- steaming out for cleaning up to +150° C, max. 30 min., open ends

Detailed catalogue page available

Ref.	DN	13	19	25	32	38	50	63	75	100
D										
SD										

- = Standard stock size
- = Special production D
- = Special production SD



### Economical and safe: reusable safety fittings

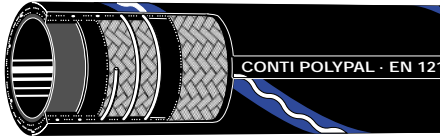
All coupling systems as mentioned in the EN 14420 (DIN 2817) standard are suitable for PAL chemical hoses. Self-assembly is possible.

### Explanations with regard to the range of dimensions

- 1) In order to guarantee a good handling for transportation, stocking and service the manufacturer provides hoses with sufficient flexibility so that greater bending radii are not necessary. The bending radii also apply to hoses with UPE lining.
- 2) These values are not valid in case of conveying strongly oxidizing chemicals; in these cases please consult us.
- 3) Only valid in case of at least 1 bar pressure, otherwise the hose kinks. For transportation and stocking the hoses of nominal diameters 75 and 100 mm may be rolled flat.

Production lengths: 40 metres

# POLYPAL® PLUS



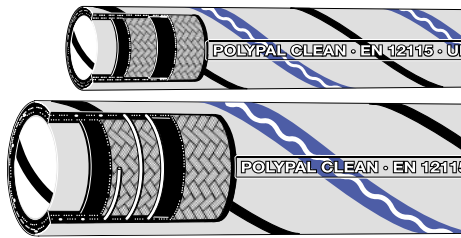
## UNIVERSAL Chemical Hose

### Lining

- homogeneous, smooth bore
- UPE (ultra high molecular polyethylene), black, electrically conductive Ω
- resistant to almost all chemicals at temperatures from -30° up to +100° C
- steaming out for cleaning up to +130° C, max. 30 min., open ends
- non resistant to oleum, bromine and chlorosulphoric acid

Ref.	DN	13	19	25	32	38	50	63	75	100
SD										

# POLYPAL® CLEAN



## UNIVERSAL- Chemical Hose "CLEAN"

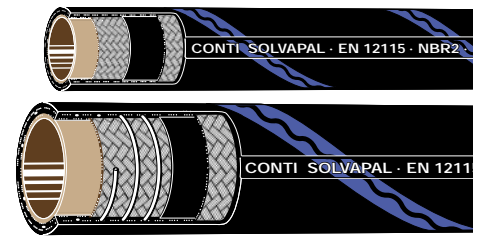
### Lining

- homogeneous, smooth bore
- UPE white, with conductive OHM spiral stripe, no discolouration, electrically conductive Ω
- suitable for nearly all liquid or viscous media at temperatures from -30° up to +100° C
- FDA approved
- steaming out for cleaning up to +130° C, max. 30 min., open ends
- non resistant to oleum, bromine and chlorosulphoric acid

Detailed catalogue page available

Ref.	DN	13	19	25	32	38	50	63	75	100
D										
SD										

# SOLVAPAL®



## Solvent Hose

### Lining

- homogeneous, smooth bore
- NBR 2 (acrylonitrile butadiene rubber), amber coloured
- resistant to a large number of mineral oil products with an aromatic content exceeding 50%
- temperature range from -20° C up to +70° C (+90° C for short intervals)
- steaming out for cleaning up to +130° C, max. 30 min., open ends

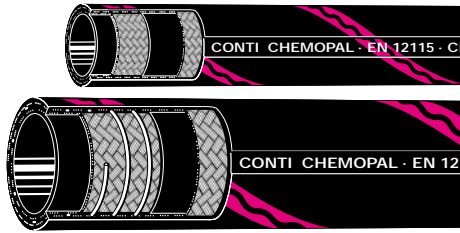
Ref.	DN	19	25	32	38	50	63	75	100
D									
SD									

Dimensions according to EN 12115	Nominal Bore DN [mm]	Wall Thickness [mm]	Min. Bending Radius <sup>1)</sup> [mm]	Weight per Metre [approx. kg]	Max. Vacuum <sup>2)</sup> [bar]
Delivery hoses Version D	13	5	80	0,35	–
	16	5	100	0,42	–
	19	6	125	0,6	–
	22	6	130	0,6	–
	25	6	150	0,8	–
	32	6	175	1,0	–
	38	6,5	225	1,3	–
	50	8	275	2,0	–
	63	8	300	2,4	–
	75	8	350 <sup>3)</sup>	2,8	–
Suction and delivery hoses Version SD	100	8	450 <sup>3)</sup>	3,8	–
	13	5	80	0,4	0,9
	19	6	125	0,7	0,9
	25	6	150	0,9	0,9
	32	6	175	1,2	0,9
	38	6,5	225	1,5	0,9
	50	8	275	2,1	0,9
	63	8	300	2,8	0,9
	75	8	350	3,3	0,9
	100	8	500	4,7	0,9

Tolerances correspond to EN 12115 · N.B. dimensions do not refer to BUTAPAL and PYROPAL



# CHEMOPAL®



## Chemical and Solvent Hose

### Lining

- homogeneous, smooth bore
- CIIR (chlorobutyl rubber), black
- resistant to a large number of alkalis, acids, acetates, aldehydes, amines, esters, ethers and ketones
- non resistant to hydrocarbons and their derivatives
- temperature range from -40° C up to +90° C
- steaming out for cleaning up to +150° C, max. 30 min., open ends

Ref.	DN	16	19	25	32	38	50	63	75	100
D										
SD										

### Marking

PAL hoses can be easily identified

- characteristic coloured spiral stripe
- abrasion-resistant continuous embossing complying with standard, see examples below

FEP 50 · ELAFLO PLUS · SD · PN16 · TRbF 131 · M · EN 12115 · 12.02

CONTI POLYPAL PLUS · EN 12115 · UPE · 50 · SD · PN 16 · Ω · 12.02

CONTI POLYPAL CLEAN · EN 12115 · UPE · 50 · SD · PN 16 · Ω · 12.02

CONTI SOLVAPAL · EN 12115 · NBR2 · 32 · D · PN 16 · M · 12.02

CONTI CHEMOPAL · EN 12115 · CIIR · 50 · D · PN 16 · M · 12.02

CONTI TECNOPAL · EN 12115 · EPDM · 75 · SD · PN 16 · Ω · 12.02

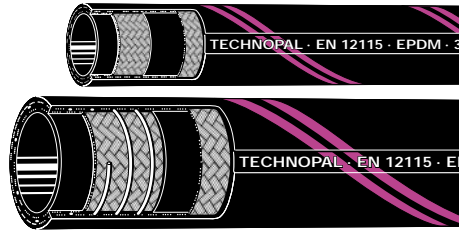
CONTI TANKAPAL · EN 12115 · NBR1 · 100 · D · PN 16 · Ω · 12.02

CONTI BUTAPAL 50 · D · EN 1762:1997 · DVGW · PN 25 BAR · Ω · 12.02

CONTI PYROPAL 164 L · DIN 2825 · DAMPF · PN 6 · EPDM · 19 · Ω · 12.02

CONTI PYROPAL 230 · DIN 2825 · DAMPF · PN 18 · EPDM · 32 · Ω · 12.02

# TECNOPAL®

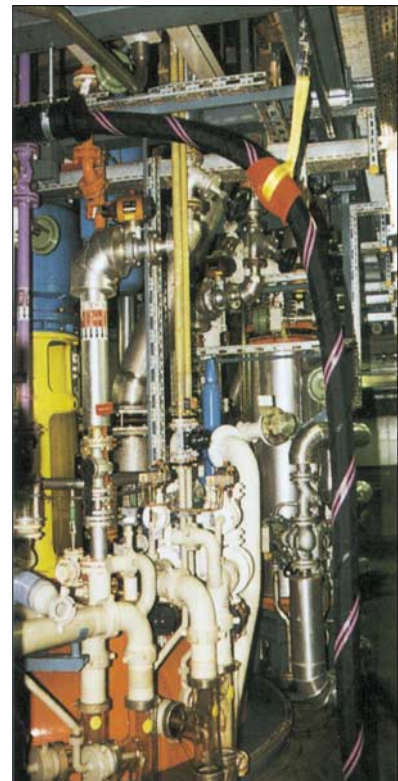


## Chemical and Solvent Hose

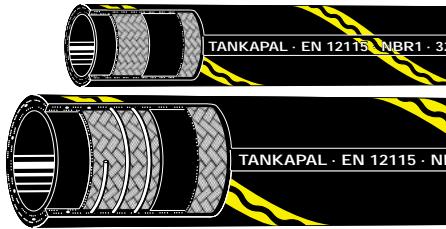
### Lining

- homogeneous, smooth bore
- EPDM (ethylene propylene rubber), black, electrically conductive Ω
- resistant to a large number of alkalis, acids, acetates, aldehydes, amines, esters, ethers and ketones
- non resistant to hydrocarbons and their derivatives
- temperature range from -40° C up to +90° C
- steaming out for cleaning up to +150° C, max. 30 min., open ends

Ref.	DN	13	19	22	25	32	38	50	63	75	100
D											
SD											



# TANKAPAL®



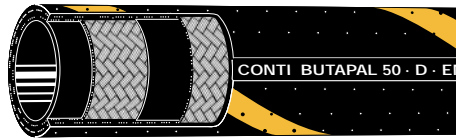
## Fuel Hose

### Lining

- homogeneous, smooth bore
- NBR 1 (acrylonitrile butadiene rubber), black, electrically conductive Ω
- resistant to petroleum based products and fuel mixtures with a maximum aromatic content of up to 50%
- temperature range from -40° C up to +80° C (+110° C for short intervals)

Ref.	DN	19	25	32	38	50	63	75	100
D									
SD									

# BUTAPAL®



## Liquid Petroleum Gas Hose acc. to EN 1762:1997

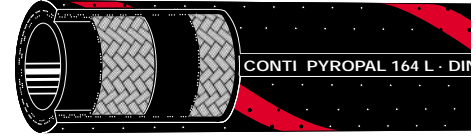
### Lining

- homogeneous, smooth bore
- NBR, black, electrically conductive Ω
- suitable for L.P. gas and natural gas (gaseous)
- not suitable for ammonia
- temperature range from -40° C up to +80° C
- working pressure 25 bar, minimum burst pressure 100 bar
- DVGW approved

Detailed catalogue page available

Ref.	DN	13	19	25	32	38	50	75	100
D									

# PYROPAL® 230



## Hose for Saturated Steam 18 bar according to DIN 2825

### Lining

- homogeneous, smooth bore
- EPDM, black, electrically conductive Ω
- suitable for saturated steam +210° C (18 bar) and hot water up to +120° C

### Reinforcements

- zinc plated steel braids, asymmetrically woven
- Minimum burst pressure 180 bar

For low pressure steam application type Pyropal 164 L is available. Please ask for detailed catalogue pages

Ref.	DN	13	19	25	32	38	50
D							

Further catalogue material available:

**BUTAPAL**  
Flüssiggasrohr nach EN 1762

**BUTAPAL®** hergestellt von der CONTITECH – für Flüssigkeiten, die sich nicht als Trennmittel ausbilden, als Zuleitungsrohr für die Anlage, die für die Befüllung und Entleerung von Behältern, Tankwagen, Silos, etc. vorgesehen ist. Die Anlage ist für die Befüllung von Behältern, die mit flüchtigen, leicht entzündlichen, giftigen, ätzenden oder sonstigen gefährlichen Stoffen gefüllt sind, vorgesehen. Die Anlage ist für die Befüllung von Behältern, die mit flüchtigen, leicht entzündlichen, giftigen, ätzenden oder sonstigen gefährlichen Stoffen gefüllt sind, vorgesehen. Die Anlage ist für die Befüllung von Behältern, die mit flüchtigen, leicht entzündlichen, giftigen, ätzenden oder sonstigen gefährlichen Stoffen gefüllt sind, vorgesehen.

Nennweite (mm)	Wandstärke (mm)	Baugruppe (mm)	Minimale Masse (kg)
13	1,5	120	0,15
19	2,0	150	0,25
25	2,5	180	0,40
32	3,0	210	0,60
38	3,5	240	0,80
50	4,5	300	1,20
75	6,0	360	2,00
100	8,0	420	3,00

**ELAFLEX PLUS FEP** (Fluoropolymer)

Nennweite (mm)	Wandstärke (mm)	Baugruppe (mm)	Minimale Masse (kg)
13	1,5	120	0,15
19	2,0	150	0,25
25	2,5	180	0,40
32	3,0	210	0,60
38	3,5	240	0,80
50	4,5	300	1,20
75	6,0	360	2,00
100	8,0	420	3,00

**PYROPAL®**

Nennweite (mm)	Wandstärke (mm)	Baugruppe (mm)	Minimale Masse (kg)
13	1,5	120	0,15
19	2,0	150	0,25
25	2,5	180	0,40
32	3,0	210	0,60
38	3,5	240	0,80
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32	3,0	210	0,60
38	3,5	240	0,80
50	4,5	300	1,20
75	6,0	360	2,00
100	8,0	420	3,00

**POLYPAL® CLEAN**

Nennweite (mm)	Wandstärke (mm)	Baugruppe (mm)	Minimale Masse (kg)
13	1,5	120	0,15
19	2,0	150	0,25
25	2,5	180	0,40
32	3,0	210	0,60
38	3,5	240	0,80
50	4,5	300	1,20
75	6,0	360	2,00
100	8,0	420	3,00

**ELAFLEX PLUS FEP** (Fluoropolymer)

Nennweite (mm)	Wandstärke (mm)	Baugruppe (mm)	Minimale Masse (kg)
13	1,5	120	0,15
19	2,0	150	0,25
25	2,5	180	0,40
32	3,0	210	0,60
38	3,5	240	0,80
50	4,5	300	1,20
75	6,0	360	2,00
100	8,0	420	3,00

**Beständigkeitsliste**  
PAL-MARKENSCHLÄUCHE  
CHEMISCHE INDUSTRIE

made by  
**CORINTTECH®**

# BUTAPAL®

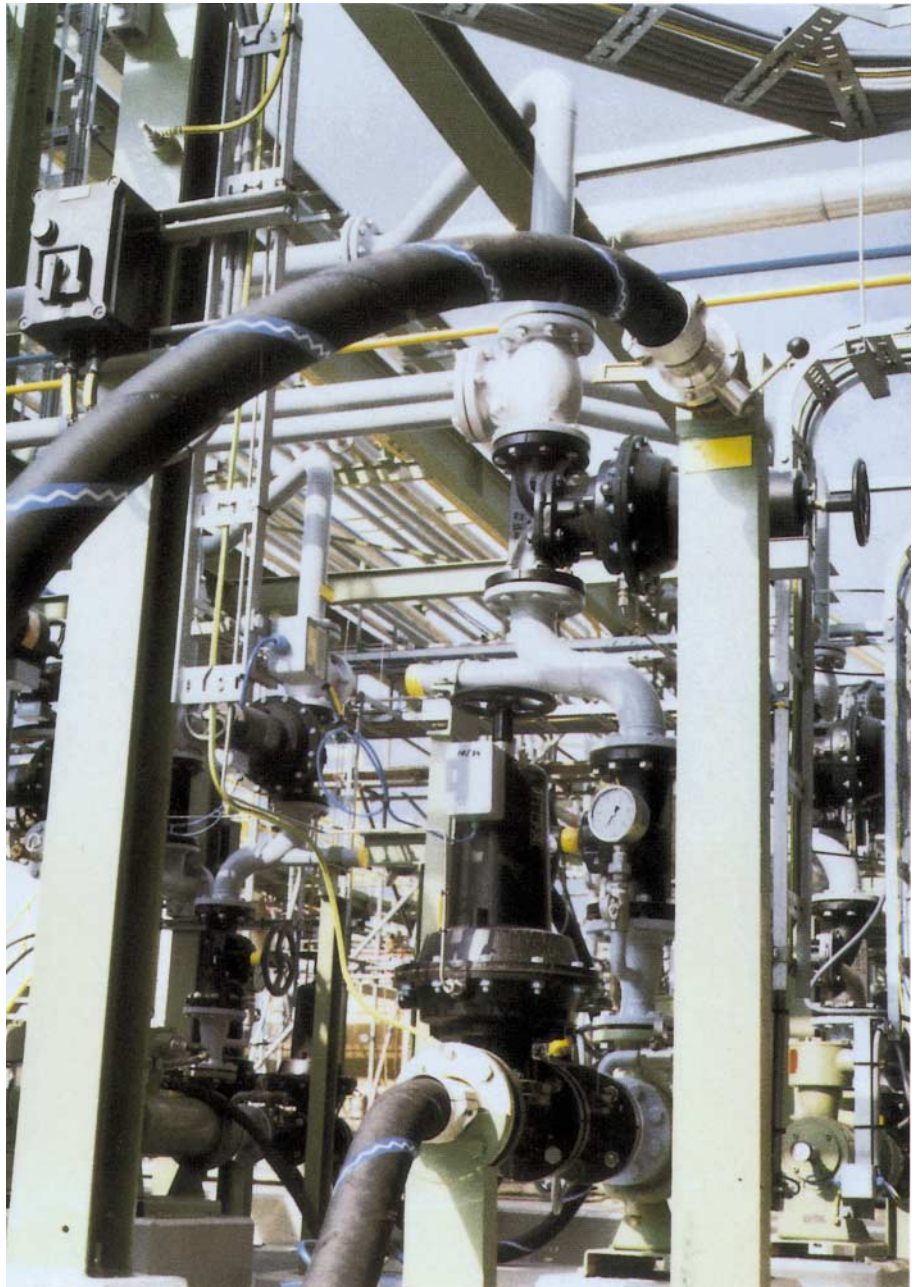


## THE COMPLETE HOSE SYSTEM FROM YOUR SERVICE PARTNER

Tell us your problems when conveying solvents, acids, alkalis and other aggressive fluids.

From ELAFLEX Schlauch + Armaturentechnik (SAT) and its partners you can obtain the right hose. For every hose the right hose coupling, fitted and tested by experts.

ELAFLEX and its partners – the safe connection.



**Remark:**

The contents of this leaflet are based on comprehensive laboratory tests and experience gained from specific applications. All details given to the best of our knowledge are accurate. They cannot be regarded as guaranteed properties and do not exempt the user from his own responsibility – also with regard to protective rights of third parties. Consulting this leaflet excludes our responsibility for damages irrespective of legal or similar arguments.

A reference of stock holding PAL service partners is available on our website, or upon request.

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